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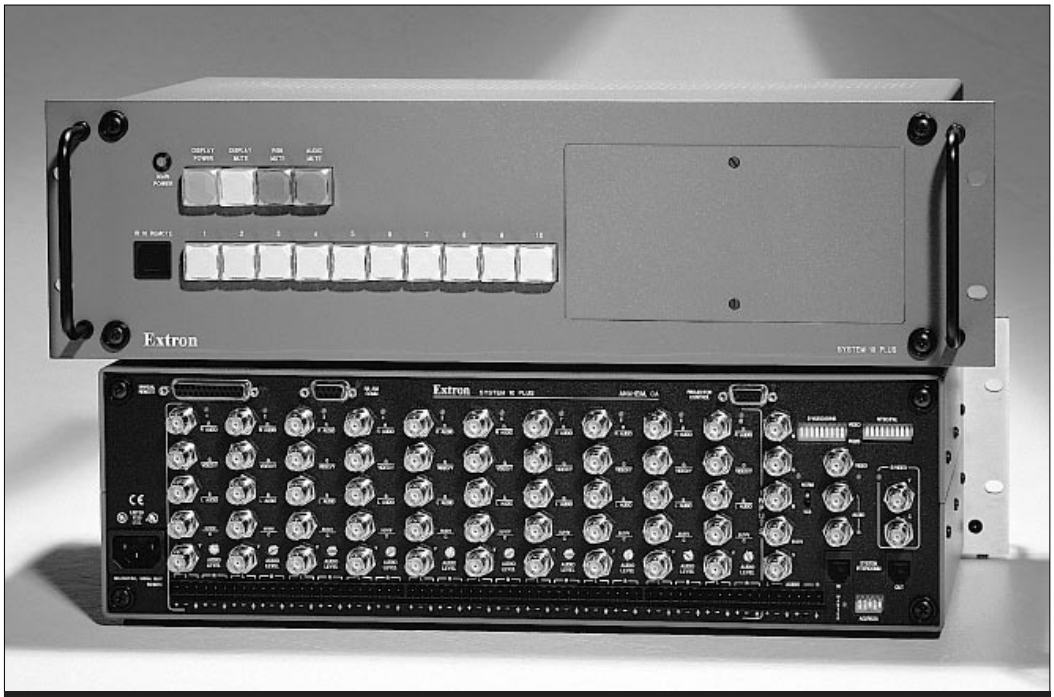

SYSTEM SWITCHERS - UNIVERSAL PROJECTOR CONTROL

- 300 MHz bandwidth
- Universal projector control
- Eight or ten inputs
- Universal inputs
- Audio-follow switching
- Audio breakaway
- 75 ohm terminated inputs
- Video loop back
- Projector power button
- Display mute button
- RGB mute button
- Audio mute button
- RS-232 control
- Triple action switching
- Contact closure control
- Rack mountable
- Metal enclosure
- Back-lit buttons
- Micro-processor controlled
- UL approved

SERVICE SUPPORT SOLUTIONS

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APPLICATIONS

SYSTEM 8 PLUS SWITCHER

SYSTEM 10 PLUS SWITCHER

The **System 8 Plus** and **System 10 Plus Switchers** offer the highest performance and versatility ever found in a video/data switcher. The high resolution 300 MHz bandwidth is two to three times that offered in most comparable switchers. This makes the Extron System Switchers perfect for switching standard video and data signals such as MAC, SUN SPARC stations, HP, Silicon Graphics, SVGA, and other high resolution computers, which require very wide bandwidth in order to accurately transmit the signals with no loss of picture quality. Universal RGB, video and audio inputs, built-in universal projector control, numerous innovative features and renown Extron quality combine to make the Extron System Switchers the switchers of choice in the Professional A/V Industry.

The System Switchers have a built-in micro-processor which provides for complete RS-232 control and projector communications. This two-way communication allows the projector and switcher to "talk and listen" to each other so the switcher functions just as if it was the same brand as the projector. Perhaps the most unique feature of all is its ability to communicate and control any of the major brands of digital data and graphics projectors such as Barco, Electrohome, Ampro, Hughes, Panasonic, NEC, Runco and Sony. So no matter which projector is being used, these universal switchers can fit the bill. Additionally, it is no longer necessary to learn, stock, and sell multiple brands of switchers when one switcher will do it all.

FEATURES

- **Universal inputs—** Each input consists of 5 BNCs and a captive screw terminal connector. These inputs can accommodate any combination of RGBS, RGsB, RGBHV, mono composite, NTSC (PAL), or S-Video. Audio can also be switched with any type of video signal (RGB or composite) using the captive screw terminal connectors; allowing for balanced or unbalanced audio. This innovative universal input style eliminates the need for multiple types of input modules, which results in lower costs, higher performance, and maximum versatility.

FEATURES (Cont.)

- **Universal projector control—** The System Switchers are compatible with all major brands of digital projectors on the market including Ampro, Barco, Electrohome, Hughes-JVC, NEC, Sony and Panasonic. The switchers are factory preset for the projector brand of your choice and can easily be reconfigured in the field for any other compatible brand in a matter of minutes by changing a few dip-switches on the switcher's communications board (front-panel accessible).
- **Outputs—** All signals input to the switcher are output in the same format. In the output section of the switcher there are separate outputs for RGB and sync, video, S-Video, and audio, which must all be run to the projector (if all are actually being used). When an input selection is made, the projector will know which video format has been selected and the proper switch is then made to input the signal through the connected projector.
- **Video Loop Back (VLB)—** This unique feature allows the switcher to integrate with either composite to RGB decoders or line doublers/quadruplers. When the feature is enabled, the composite or S-Video output of the switcher can be routed through a decoder or line doubler/quadrupler and back into the switcher (into input #8, or #10 for the System 10 Plus) as an RGB input. The benefits of this feature include having to use only one decoder or doubler/quadrupler for all the video inputs, rather than using one unit for each video source and one cable to the projector.
- **300 MHz bandwidth—** This allows any and all signals to be passed through with no loss of signal resolution. This wide bandwidth is extremely important when using high resolution computer signals such as SUN, Silicon Graphics, Apollo, and others.
- **Switcher control—** Each input on the switcher can be selected in any of the following ways:
  - **Front panel buttons -** Professional quality back-lit push buttons which can be removed in order to label each input source.
  - **Remote control connector -** Contact closure remote control connector for hard-wired remote control with tally indication.
  - **RS-232 -** Allows for computer control of switcher or third party remote control system use.
  - **Projector's Infrared remote -** Projector's IR (or hard-wired) remote will control the switchers via the projector. Simply use the remote control (IR or hard-

FEATURES (Cont.)

wired) included with your projector purchase and it will switch Extron's System Switchers.

- **Display power/display mute/ RGB mute/audio mute—** Front panel buttons make it simple to turn on/off the connected projector/mute the projector's video or RGB signal and mute the switched audio signal. Each of these functions can be activated via touch buttons on the front panel of the System Switchers, with the projector's remote control, or with a third party control system.
- **Audio follow or breakaway switching—** All audio signals can be either switched to follow any one input (RGB or video), group of inputs or all inputs.
- **Balanced or unbalanced audio—** 5 mm captive screw terminal audio connectors are used to input and output all audio signals. This style of audio connector allows for true balanced or unbalanced line audio switching. All connectors are included with each switcher.
- **Triple action switching—** Each brand of projector has its own way of blanking between switching from one input to another. Using the Extron System Switchers will insure that when this switch happens the projector will "go to black". Extron's switcher will switch sync before video (RGB), wait until the projector is "locked-on," and then switch the video signal. The time delay for this 1, 2, 3 switching can be programmed by the user.
- **Loopable for additional inputs—** Up to 17 switchers can be looped, or daisy-chained, to provide up to 154 inputs (when using System 10 Plus Switchers).
- **Rear panel LEDs—** LEDs located on the rear panel of the System Switchers indicate which input has been selected and which output the signal has been switched to.
- **Includes rack mount—** The 3 U high 19" enclosure of the System 8/10 Plus includes an integrated front panel rack mount.
- **Optional IR remote—** Extron offers an optional IR (infrared) remote control to control front-panel functions: The IR-30.
- **Easy expansion—** Until now, adding inputs meant buying more modules. The System Switchers come in two versions (eight inputs or ten inputs) that are fully loaded with totally universal inputs (video, RGB, S-Video and audio). Thus, no future costs are incurred when needing to expand; the System Switchers are future ready.
- **High performance—** The 300 MHz (-3 dB) video bandwidth of the System Switchers make them the highest performance projector control switchers on the market. This 300 MHz bandwidth allows for connection of not only video signals, but also super high resolution SUN, Silicon Graphics, NeXT, Chromatics and DEC Workstations running up to 135 kHz.

FEATURES (Cont.)

ACCESSORIES

In order to make the System Switcher properly communicate with the projector(s) of choice, the following additional components are required. First, a communication cable (CC 50', CC 100' or CC 200') is needed to carry the two-way communications between the projector and the switcher. Second, a projector communications adapter is needed to connect the CC cable to the projector. A separate adapter must be ordered for each projector brand being used (for example, Ampro Comm Adapter, or Barco Comm Adapter). This is due to the fact that although the System Switchers are universal, each projector manufacturer has a different type of communications input. The Comm Adapter makes that connection possible. And finally, the switcher itself is needed to complete the system.

Projector Communication Extension Cables	Part Number
CC 50' (50 Feet)	26-305-01
CC 100' (100 Feet)	26-305-02
CC 200' (200 Feet)	26-305-03
IR-30 (Remote Control)	70-037-01

Projector Communication Adapters	Model	Part Number
Ampro Communications Adapter	AM COM	26-304-01
Barco Communications Adapter	BR COM	26-309-01
Digital Projection Comm Adapter	DIGPROS COM	26-449-01
Electrohome Comm Adapter (ECP)	EL COM	26-310-01
Electrohome Comm Adapter (Marquee)	ELMA COM	26-355-01
Electrohome Comm Adapter	VISTA PRO COM	26-341-02
Hughes/JVC Comm Adapter	HU COM	26-341-01
Mitsubishi Comm Adapter (XC)	MIXC COM	26-373-01
Mitsubishi Comm Adapter (VS)	MIVS COM	26-381-01
NEC/Runco Comm Adapter	NEC COM	26-311-01
Panasonic Comm Adapter	PAN COM	26-382-01
Panasonic Comm Adapter (UN)	PANUN COM	26-382-02
Seleco Comm Adapter	SEL COM	26-423-01
Sharp Comm Adapter	SHARP COM	26-426-01
Sony Comm Adapter	SY COM	26-312-01
Toshiba Comm Adapter	TOSH COM	26-422-01
Zenith Comm Adapter	ZEN COM	26-450-01

SPECIFICATIONS

Video
- Bandwidth
  - System 8 Plus ..... 300 MHz (-3 dB)
  - System 10 Plus ..... 260 MHz (-3 dB)
- Crosstalk at 10 MHz ..... -35 dB
- Isolation at 10 MHz ..... -55 dB
- Switching speed ..... 5 mS (Max)
- Return loss at 10 MHz ..... +25 dB

Audio input
- Connectors ..... Captive screw type, 6 conductor
- Impedance ..... >10k ohm, AC coupled
- Maximum level (balanced or single-ended) ..... 13.2 dBu
- CMRR ..... >60 dB typical

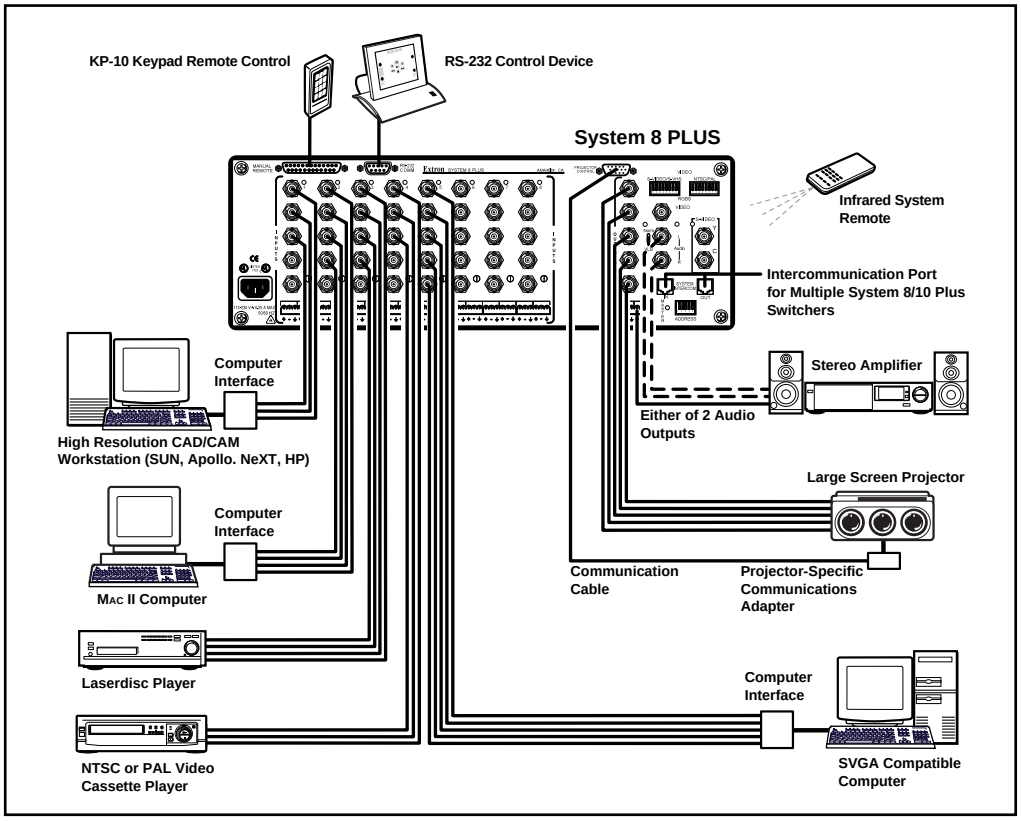
Audio throughput
- Routing
  - System 8 Plus ..... 1 of 8 stereo routing
  - System 10 Plus ..... 1 of 10 stereo routing
- Response ..... ±.05 dB 20 Hz to 20 kHz
- Attenuation ..... -95 dB to 0 dB, both left and right stereo channels per input
- THD + noise ..... 0.002% worst case
- S/N ..... >95 dBu, 0 dBu reference
- Adjacent input crosstalk ..... Better than 85 dB from 20 Hz to 20 kHz
- Stereo channel separation ..... 60 dB from 20 Hz to 20 kHz

Audio output
- Type ..... 1 output, stereo, balanced or unbalanced
- Connectors ..... Captive screw type, 6 conductor
- Impedance ..... 50 ohms

Audio gain
- Output taken single ended .... 0 dB - throughput gain
- Output taken differentially .... +6 dB - throughput gain
- Gain error ..... ±0.2 dB channel to channel
- Muting ..... >95 dB
- Drive ..... +13.2 dBu into 600 ohms

Power supply ..... 100-240 VAC, 50/60 Hz Auto-switchable
Power consumption ..... 10 watts
Operating temperature ..... 0 - 50˚C
Storage temperature ..... -20 - 70˚C
MTBF ..... 30,000 hrs. demonstrated
Approvals ..... CE, UL & CUL listed
Dimensions ..... 17" W x 5" H x 10.1" D
43 W x 12.7 H x 25.6 D cm
Shipping weight ..... 20 lbs 7.5 oz (9 kg)
Warranty ..... Two years, parts & labor
Part numbers
- System 8 Plus 60-107-01
- System 10 Plus 60-108-01

APPLICATION DIAGRAM



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